

IN THE CLAIMS:

1-43. (Canceled)

44. (Currently amended) A sustained culture of undifferentiated chicken cells expressing an embryonic stem cell phenotype, the sustained culture comprising:

- (a) a preconditioned STO feeder matrix;
- (b) Buffalo Rat Liver (BRL) conditioned media;
- (c) chicken primordial germ cells and chicken stromal cells, wherein the chicken primordial germ cells and stromal cells are isolated together from the embryonic genital ridge or gonad from a chicken embryo at a stage later than stage 14 according to the Hamburger & Hamilton staging system; and
- (d) undifferentiated chicken cells expressing an embryonic stem cell phenotype,

wherein the undifferentiated chicken cells:

- (i) are derived from the chicken primordial germ cells isolated from the chicken embryo;
- (ii) are smaller than the chicken primordial germ cells; and
- (iii) form one or more colonies of tightly packed undifferentiated chicken cells expressing an embryonic stem cell phenotype.

45-46. (Canceled)

47. (Previously presented) The sustained culture of claim 44 wherein the preconditioned feeder matrix comprises cells that have been isolated from the gonad of a chicken embryo later than stage 14 according to the Hamburger & Hamilton staging system.

48. (Previously presented) The sustained culture of claim 44 wherein the preconditioned feeder matrix comprises cells that have been isolated from the

genital ridge of a chicken embryo later than state 14 according to the Hamburger & Hamilton staging system.

49-51. (Canceled)

52. (Previously presented) The sustained culture of claim 44 wherein the conditioned media comprises a supplemental growth factor selected from the group consisting of leukemia inhibitory factor (LIF), insulin-like growth factor (IGF), fibroblast growth factor (FGF), basic fibroblast growth factor (bFGF), stem cell factor (SCF), steel factor (SF), transforming growth factor- β 1 (TGF- β 1), anti-retinoic acid, and combinations thereof.

53. (Previously presented) The sustained culture of claim 44 wherein the embryonic stem cell phenotype is maintained for at least one month.

54. (Previously presented) The sustained culture of claim 44 wherein the embryonic stem cell phenotype is maintained for at least two months.

55-57. (Canceled)

58. (Previously presented) The sustained culture of claim 44, wherein the undifferentiated chicken cells maintain the embryonic stem cell phenotype when grown on the preconditioned fibroblast feeder matrix in the presence of the conditioned media for at least three days.